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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,358	09/29/2000	Geoffrey Park	04324.P030	1115
25920	7590	11/22/2004		EXAMINER
				LEE, Y YOUNG
			ART UNIT	PAPER NUMBER
				2613

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/675,358	PARK, GEOFFREY
	Examiner	Art Unit
	Y. Lee	2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 16 July 2004.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-12 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 16 July 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 7/16/04. These drawings are acceptable.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1, 5-7, 11, and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant's admitted prior art for the same reasons as set forth in Section 5 of the last office action, dated 3/10/04.

Applicant's admitted prior art, in Figure 2, discloses the same system and method for automatically detecting scene changes within a digital video sequence including a succession of frames as specified in claims 1, 5-7, 11, and 12, comprising computing metrics for each of a plurality of frames (y) from a digital video sequence, the metric of a frame being a measure of distance between the frame and a given frame (e.g. AB and CD); identifying a candidate frame (e.g. right short segment) for which the metric of the candidate frame differs from the metric of the predecessor frame (y) to the candidate frame, by at least a first threshold; determining whether the metrics of successive ones of each of a first plurality of frames 215, successively following the candidate frame, differ from one another by less than a second threshold; and further

determining whether the metrics of each frame of a second plurality of frames (y), successively preceding the candidate frame, are larger than a third threshold.

With respect to claims 5 and 11, Applicant's admitted prior art also discloses marking the candidate frame 220 as a scene change frame, when the determining determines that the metrics of successive ones of each of the first plurality of frames (y) differ from one another by less than the second threshold (e.g. CD), and when the further determining determines that the metrics of each frame of the second plurality of frames are larger than the third threshold.

With respect to claims 6 and 12, Applicant's admitted prior art also discloses the marking does not mark the candidate frame as a scene change frame if a frame (x) preceding the candidate frame is substantially similar to the current frame (y).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Gargi et al (Performance Characterization of Video-Shot-Change Detection Methods) for the same reasons as set forth in Section 7 of the last office action, dated 3/10/04.

It is noted Applicant's admitted prior art differs from the present invention in that it fails to particularly disclose using color histograms for measuring distances as specified

in claims 2-4 and 8-10. Gargi et al however, in Section IV, teaches the concept of such well known measure of distance based on color histograms of frames wherein the measure of difference is a sum of absolute values (Eq. 1) and sum of squares (Eq. 2) of differences of histogram frequencies.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, having both the references of Applicant's admitted prior art and Gargi et al before him/her, to exploit the common frame difference measuring techniques as taught by Gargi et al in the scene change detection system of Applicant's admitted prior art, in order to obtain the best scene detection performance at a moderate computational cost.

#### ***Response to Arguments***

6. Applicant's arguments filed 7/16/04 have been fully considered but they are not persuasive. Applicant asserts on page 7 of the Remarks that the newly amended Figure 2 would render APA as an invalid reference. However, it is submitted that the old segment (i.e. the second short segment), although no longer labeled with a numeral, is still a scene change. In that sense, APA is determining the metrics of frames (i.e. y within width AB) successively preceding it, thus meeting the claimed invention.

#### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Y. Lee whose telephone number is (703) 308-7584. The examiner can normally be reached on (703) 308-7584.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Y. Lee  
Primary Examiner  
Art Unit 2613